## Amendments to the Claims:

## Listing of the Claims

- 1. (currently amended) A method for diagnosis and prognosis of cancer in a subject comprising:
  - (a) detecting at least one S100 protein selected from the group consisting of S100-AG, S100-A7, S100-A8 and S100-A9 in a biological fluid sample derived from a subject; and
  - (b) comparing the level of protein detected in the subject's sample to the level of protein detected in a control sample,

wherein an increase in the level of S100 protein detected in the subject's sample as compared to a control sample is an indicator of a subject with cancer.

- 2. (previously presented) The method of claim 1 wherein the S100 protein is detected using an immunoassay.
- 3. (previously presented) The method of claim 2 wherein the immunoassay is an immunoprecipitation assay.
- 4. (previously presented) The method of claim 1 wherein the sample is a serum sample.
- 5. (previously presented) The method of claim 1 wherein the cancer is lung cancer.

- 6. (withdrawn) The method of claim 1 wherein the cancer is breast cancer.
- 7. (withdrawn) The method of claim 1 wherein the cancer is colon cancer.
- 8. (withdrawn) A method for diagnosis of a subject with cancer comprising:
  - (a) contacting a serum sample derived from a subject with a sample containing S100 protein antigens under conditions such that a specific antigen-antibody binding can occur; and
  - (b) detecting immunospecific binding of the autoantibodies to the S100 protein in the subject's serum sample,

wherein the presence of autoantibodies indicates the presence of cancer.

- 9. (withdrawn) The method of Claim 8 wherein the step of detecting the autoantibodies in the subject's serum sample comprises the use of a signal-generating component bound to an antibody that is specific for antibodies in the subject's serum sample.
- 10. (withdrawn) The method of Claim 9 wherein the presence of autoantibodies in the serum sample is measured by an immunoassay comprising:
  - (a) immobilizing one or more S100 protein onto a membrane or substrate;
  - (b) contacting the membrane or substrate with a subject's serum sample;and
  - (c) detecting the presence of autoantibodies specific for the S100 protein in the subject's serum sample,

wherein the presence of autoantibodies indicates the presence of cancer.

- 11. (withdrawn) The method of claim 8 wherein the cancer is lung cancer.
- 12. (withdrawn) The method of claim 8 wherein the cancer is breast cancer.
- 13. (withdrawn) The method of claim 8 wherein the cancer is colon cancer.
- 14. (currently amended) A kit for diagnosis and prognosis of cancer in a subject comprising a component for detecting the presence S100 protein in a biological sample, wherein said S100 protein is selected from the group consisting of S100-A7, S100-A8 and S100-A9.
- 15. (previously presented) The kit of claim 14 wherein the component for detecting the S100 protein is an anti-S100 antibody.
- 16. (previously presented) The kit of claim 15 wherein the anti S-100 antibody is labeled.
- 17. (previously presented) The kit of claim 16 wherein the label is a radioactive, fluorescent, colorimetric or enzyme label.
- 18. (previously presented) The kit of claim 15 further comprising a labeled second antibody that immunospecifically binds to the anti-S100 antibody.
- 19. (withdrawn) A kit for diagnosis and prognosis of cancer in a subject comprising a component for detecting the presence of S100 autoantibodies in a sample.
  - 20. (withdrawn) The kit of claim 19 wherein the component is a n S100 antigen.

- 21. (withdrawn) The kit of claim 20 wherein the S100 antigen is labeled.
- 22. (withdrawn) The kit of claim 20 wherein the S100 antigen is linked to a solid phase.
- 23. (withdrawn) The kit of claim 19 further comprising a component for detection of the S100 autoantibody.
- 24. (withdrawn) A method of immunizing a host against an S100 protein, S100 derived peptide or differentially modified S100 protein, comprising inoculating the host with an S100 antigen in a physiologically acceptable carrier, wherein immunization results in a production of antibodies directed against said S100 antigen.
- 25. (withdrawn) The method of claim 24 wherein the host is suffering from a disease characterized by the overproduction of S100 protein.
  - 26. (withdrawn) The method of claim 25 wherein the disease is cancer.
  - 27. (withdrawn) The method of claim 26 wherein the cancer is lung cancer.
  - 28. (withdrawn) The method of claim 26 wherein the cancer is breast cancer.
  - 29. (withdrawn) The method of claim 26 wherein the cancer is colon cancer.
  - 30. (withdrawn) The method of claim 24 wherein the S100 protein is selected from the group consisting of S100-AG, S100-A7, S100-A8 and S100-A9.

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- 31. (withdrawn) A composition for immunizing a host comprising at least one S10 protein and an adjuvant.
- 32. (withdrawn) The composition of claim 31 wherein the S100 protein is selected from the group consisting of S100-AG, S100-A7, S100-A8 an S100-A9.